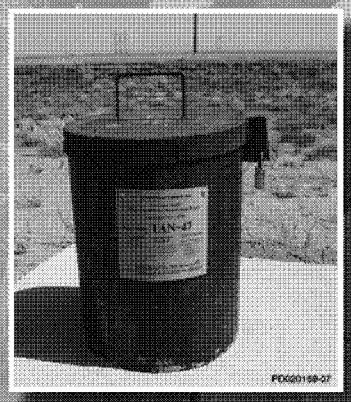
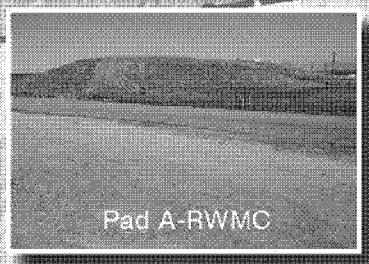
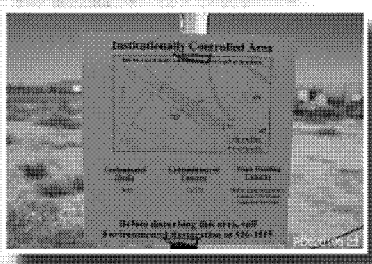
DOE/ID-11042 – Revision 0
Project No. 23689
December 2003

INEEL Sitewide Institutional Controls Plan for CERCLA Response Actions







DOE/ID-11042 – Revision 0
Project No. 23689

Idaho National Engineering and Environmental Laboratory Sitewide Institutional Controls Plan for CERCLA Response Actions

December 2003

Prepared for the
U.S. Department of Energy
DOE/NE Idaho Operations Office

ABSTRACT

This institutional control plan documents how the Idaho National Engineering and Environmental Laboratory (INEEL) will comply with the record of decision (ROD) mandating sitewide institutional controls. This plan describes work procedures that the U.S. Department of Energy Idaho Operations Office will use to institute, maintain, and/or evaluate required existing and future institutional controls.

On November 9, 2002, the U.S. Environmental Protection Agency (EPA), the U.S. Department of Energy, and the Idaho Department of Environmental Quality approved the ROD for Waste Area Group (WAG) 10 Operable Unit (OU) 10-04. That ROD requires an INEEL-wide institutional controls plan. Existing INEEL institutional control plans are based on the guidance in the May 3, 1999, EPA Region 10 final policy on the use of institutional controls at federal facilities. The policy established measures that ensure short- and long-term effectiveness of institutional controls that protect human health and the environment at federal facility sites undergoing remedial action pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act and/or corrective action pursuant to the Resource Conservation and Recovery Act.

The WAG-specific institutional controls currently in place at the INEEL are documented in this sitewide plan. This plan will be updated as new information regarding sites becomes available, as other requirements related to institutional controls are specified in post-ROD documentation, or when institutional controls change or are terminated. The *INEEL Comprehensive Facilities and Land Use Plan* (DOE/ID-10514) will complement and support this plan by providing current and projected facility and land uses.

CONTENTS

FIGURES

TABLES

ACRONYMS

ALARA	as low as reasonably achievable
BBWI	Bechtel BWXT Idaho, LLC
BLM	Bureau of Land Management
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFLUP	Comprehensive Facility and Land Use Plan
CFR	Code of Federal Regulations
COPC	contaminant of potential concern
DD&D	deactivation, decontamination, and decommissioning
DOE	U.S. Department of Energy
EC	environmental checklist
EPA	U.S. Environmental Protection Agency
ESD	explanation of significant differences
ESH&QA	Environment, Safety, Health, and Quality Assurance
FFA/CO	Federal Facility Agreement and Consent Order
FPAS	Federal Property and Administrative Services (Act)
FR	Federal Register
FS	feasibility study
GSA	General Services Administration
HWMA	Hazardous Waste Management Act
IC	institutional control
ICDF	INEEL CERCLA Disposal Facility
IDEQ	Idaho Department of Environmental Quality
IDW	investigation-derived waste
INEEL	Idaho National Engineering and Environmental Laboratory
INEL	Idaho National Engineering Laboratory
INTEC	Idaho Nuclear Technology and Engineering Center
ISMS	Integrated Safety Management System

NCP	National Contingency Plan
NE	DOE Office of Nuclear Energy, Science, and Technology
NE-ID	U.S. Department of Energy Idaho Operations Office
NEPA	National Environmental Policy Act
NPL	National Priorities List
NSD	Notice of Soil Disturbance
ou	operable unit
RCRA	Resource Conservation and Recovery Act
RD/RA	remedial design/remedial action
RI/FS	remedial investigatiodfeasibility study
ROD	record of decision
RWMC	Radioactive Waste Management Complex
RWP	radiation work permit
SSSTF	Staging, Storage, Sizing, and Treatment Facility
TRA	Test Reactor Area
TSD	treatment, storage, or disposal
USC	United States Code
VPP	Voluntary Protection Program
WAC	waste acceptance criteria
WAG	waste area group

TERMS/DEFINITIONS

Action memorandum. A primary decision document, equivalent to a record of decision (ROD), explaining the rationale for a selected removal action (time critical or nontime critical)

CERCLA explanation of significant differences (ESD). A document explaining a significant change to a remedial action selected in a CERCLA ROD.

CERCLA decision document. Refers to action memorandums, RODs, ROD amendments, and ESDs.

CERCLA record of decision (ROD). Official document presenting the selected decision for a remedial action. A ROD also documents a federal agency decision made on an environmental impact statement."

CERCLA ROD amendment. Documents a fundamental change to a remedial action in a previously issued ROD.

CERCLA site. For the purposes of this document, a site requiring institutional controls (ICs).

Disposal (of real property). The temporary or permanent transfer of ownership, possession, or control of real property from the U.S. Department of Energy to another party by lease, deed, or transfer between federal agencies.

Easement. A right to use property for a specific purpose, allowing an entity to use land owned by another.

Failed control. A condition inconsistent with a specific IC objective for a CERCLA site, such as unauthorized well drilling, intrusion into engineered covers, or a change in land use from industrial to residential.

Final closeout report. The final record for a site, documenting compliance with statutory requirements for CERCLA and providing a record of remedial/removal activities for an entire site.

Institutional control (IC). The EPA defines ICs as non-engineered instruments, such as administrative and/or legal controls, that help to minimize the potential for human exposure to contamination and/or protect the integrity of a remedy. ICs work by limiting land or resource use and/or by providing information that helps modify or guide human behavior at the site. Some common examples of ICs include zoning restrictions, building or excavation permits, well drilling prohibitions and easements and covenants.

National Priorities List (NPL). A list, maintained by the U.S. Environmental Protection Agency, of uncontrolled hazardous waste sites that have releases of, or could release, hazardous substances to the environment and are subject to CERCLA.

Operable unit (OU). A waste area group (WAG) subset that is a potential source area to be investigated and/or remediated.

Waste area group (WAG). The INEEL NPL site is divided into operational facility (geographic) areas WAGs to facilitate environmental remediation, with the exception of WAG 10; WAG 10 includes areas not in the other WAGs plus the Snake River Plain Aquifer.

Idaho National Engineering and Environmental Laboratory Sitewide Institutional Controls Plan for CERCLA Response Actions

1. INTRODUCTION/PURPOSE

On November 9, 2002, the U.S. Environmental Protection Agency (EPA) and the Idaho Department of Environmental Quality (IDEQ) approved and issued the record of decision (ROD) for Waste Area Group (WAG) 10 Operable Unit (OU) 10-04, DOE/ID-10980 (DOE-ID 2002a). The ROD requires a sitewide institutional controls plan for the Idaho National Engineering and Environmental Laboratory (INEEL) Site. The U.S. Department of Energy Idaho Operations Office (NE-ID)[a] prepared this plan to include those Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) WAGs and OUs under direct control of NE-ID. Therefore, as of April 1, 2003, this plan excludes WAGs 8 and 9. NE-ID may revise this plan at a later date to include the institutional controls (ICs) for WAGs 8 and 9.

The ICs at the INEEL are based on guidance in the May 3, 1999, EPA Region 10 final policy on the use of ICs at federal facilities (EPA 1999). Consistent with the IC policy, NE-ID will: (a) implement measures that ensure short- and long-term effectiveness of ICs that protect human health and the environment at federal facility sites undergoing remedial action pursuant to CERCLA (42 USC 9601, et seq.) and/or corrective action pursuant to the Resource Conservation and Recovery Act (RCRA) (42 USC 6901 et seq.), (b) file an initial IC status report on the status of the ICs with IDEQ and EPA within 6 months after the signing of any decision documents such as a CERCLA ROD and/or a RCRA statement of basis, and (c) submit IC assessment reports at least annually thereafter. The EPA IC policy allows a federal facility (e.g., INEEL) to submit one IC assessment report to cover all OUs and all ICs at the federal facility. After a federal facility's comprehensive facility-wide approach is well established and the facility has demonstrated its effectiveness, the frequency of future IC assessment reports may be modified by agreement with EPA and IDEQ. The INEEL prepared this comprehensive INEEL-wide IC plan to include processes for controlling activities as outlined in the EPA Region 10 policy.

This plan describes inspection methods and work control procedures that have been used to institute and inspect the existing INEEL ICs. Refer to Appendix A for a listing of institutionally controlled sites and wells at the INEEL. The *INEEL Comprehensive Facility and Land Use Plan* (CFLUP), DOE/ID-10514 (DOE-ID 1997a) will support this plan by listing current and projected facility and land uses. The CERCLA module of the CFLUP tracks the institutionally controlled areas. This edition of the sitewide IC plan addresses current CERCLA response actions. Future editions will include CERCLA and RCRA response actions, as necessary.

This IC plan, upon acceptance by EPA and IDEQ, integrates the institutional controls portions of any previous NE-ID documents that describe procedures to institute, maintain, and evaluate institutional controls at the INEEL Site. Only the portions of those documents that pertain to institutional controls are integrated. No other materials in the documents are replaced, integrated, or altered. Any future RODs that institute, maintain, or evaluate institutional controls shall be consistent with this plan, and shall be integrated in future versions of this plan. Refer to Appendix B for a listing of the relevant INEEL documents with IC information, portions of which are now integrated into this IC plan.

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a. NE-ID signifies that the Department of Energy Idaho Operations Office reports to the DOE office of Nuclear Energy, Science: and Technology (NE).

All commitments made in RODs to implement ICs through instruments controlling rights in real property, including deeds, restrictive covenants, and leases, remain subject to federal statutes, regulations, and other applicable laws governing the disposition of real property, including general policies on real property of the Department of Interior Bureau of Land Management (BLM), the General Services Administration (GSA), and the Department of Energy (DOE). This IC plan is not itself a ROD or CERCLA decision document and is not part of the Federal Facility Agreement/Consent Order (FFA/CO). The authority for IC activities derives from the RODs and decision documents.

The information in this plan will be updated on an annual basis, if deemed necessary, as new information regarding sites becomes available, as requirements related to ICs are specified in future RODs or in other post-ROD documentation, when ICs change or are terminated, or when IC-controlled property is transferred or leased.

This plan fulfills the requirement for a sitewide institutional control plan set forth in the WAG 10 OU 10-04 ROD (DOE-ID 2002) and consolidates IC requirements established in the following CERCLA RODs for the INEEL.

WAG 1

- *Final Record of Decision for Test Area North, Waste Area Group 1 Operable Unit 1-10,* DOE/ID-10682, Rev. *0,* October 1999.

- *Record of Decision (ROD) for TSF-05 Injection Well and Surrounding Groundwater (GW) Contamination TSF-23 and Miscellaneous No Action Sites Final Remedial Action,* DOEAD-10139, August 1995.

- *Record of Decision (ROD) Amendment – Technical Support Facility Injection Well TSF-05 and Surrounding Groundwater Contamination TSF-23 and Miscellaneous No Action Sites, Final Remedial Action (RA),* DOE/ID-10139 Amendment, September 2001.

- *Explanation of Signijicant Differences for the Record of Decision for the Test Area North Operable Unit 1-10 ESD,* DOEAD-11050, Rev. 0, April 2003.

WAG 2

- *Final Record of Decision Test Reactor Area, Waste Area Group 2, Operable Unit 2-13,* DOE/ID-10586, December 1997.

- *Explanation of Signijicant Differences to the Record of Decision for the Test Reactor Area Operable Unit 2-13,* DOE/ID-10744, Rev. *0,* May 2000.

WAG 3

- *WAG 3 Final Record Of Decision, Idaho Nuclear Technology and Engineering Center, Waste Area Group 3 Operable Unit 3-13,* DOEAD-10660, October 1999.

WAG 4

- *WAG 4 Final Comprehensive Record of Decision for Central Facilities Area Operable Unit 4-13,* DOE/ID-10719, Rev. 2, July 2000.

WAG 5

- *WAG 5 Record of Decision for Power Burst Facility Auxiliary Reactor Area (PBF/ARA) Operable Unit 5-12,* DOE/ID-10700, Rev. 0, January 2000.

WAGs 6 and 10

- *Record of Decision (ROD) for Experimental Breeder Rector I & Boiling Water Reactor Experiment Area (EBR-1/Borax) Operable Units (OU) 10-04 and 6-05 and Miscellaneous Sites,* DOE/ID-10980, Rev. *0,* November 2002.

WAG 7

- *Record of Decision (ROD): Declaration for PAD-A at the Radioactive Waste Management Complex (RWMC) Subsurface Disposal Area (SDA),* February 1994.

- *Record of Decision (ROD) for Organic Contamination in the Vadose Zone (OCVZ), RWMC, INEL,* December 1994.

- *Record of Decision (ROD) – Declaration for Pit 9 at the Radioactive Waste Management Complex (RWMC) Subsurface Disposal Area (SDA),* October 1993.

The table in Appendix A includes the current list of INEEL institutionally controlled sites and describes the following:

- The CERCLA site
- Contaminants
- Institutional controls
- The implementation tools
- Objective of the controls
- Current time frame
- References to the appropriate sources, e.g., decision documents or implementation plans.

The table in Appendix A also includes a list of institutionally controlled wells and alias names.

1.1 Definition, Source, and Timing of ICs

As the NE-ID conducts the cleanup mission at the INEEL Site, CERCLA-required ICs have become an integral part of remediation activities. The ICs supplement active cleanup remedies to protect human health and the environment prior to cleanup, during cleanup, and during postremediation activities in areas that contain residual hazards.

1.1.1 Definition of ICs

The 1999 EPA Region 10 final policy on the use of ICs at federal facilities (EPA 1999) states that ICs:

> "... generally include all nonengineered restrictions on activities, access, or exposure to land, groundwater, surface water, waste and waste disposal areas, and other areas or media. Some common examples of tools to implement ICs include restrictions on use or access, zoning, governmental permitting, public advisories, or installation master plans. ICs may be temporary or permanent restrictions or requirements."

ICs are used in conjunction with engineered/physical remedies to protect human health and the environment. Categories of ICs described in Section 3 of this plan will be used to implement IC requirements.

1.1.2 IC Requirements and the CERCLA Process

The CERCLA process requires that hazardous wastes and hazardous/toxic materials released to the environment above acceptable release levels be managed to protect human health and the environment. The National Contingency Plan (NCP) sets forth the methods for evaluating and selecting remedies. The NCP allows ICs to supplement engineering controls during investigation and remediation, and, as required, to be used as part of the remedy. Additionally, ICs may be specified as a selected remedy when certain criteria are satisfied. The individual CERCLA cleanup actions and associated ICs are set forth in CERCLA decision documents. These decision documents are maintained as part of the administrative record that documents the remedy selection process. The ICs may be specified in the following types of CERCLA decision documents:

- Action memorandum
- CERCLAROD
- CERCLA ROD amendment
- CERCLA explanation of significant differences (ESD).

The CERCLA process begins with an assessment phase (i.e., remedial investigatiodfeasibility study [RI/FS]), during which, data are collected and evaluated to facilitate selection of a remedy to mitigate risks or potential risks to human health and the environment. After the RI/FS is completed and alternatives are analyzed objectively, the decision phase is initiated. This phase includes preparation of an RI/FS summary document, a proposed plan that describes the results of the RI/FS. That plan is issued, and public meetings are held, as necessary, to allow for public participation in the remedy selection decision. After the public participation period, the ROD, which documents the remedy selection decision, is prepared and issued. The ROD contains the significant facts, analysis of facts, and other pertinent information used to select the remedy. A key portion of the ROD is an explanation of how the nine CERCLA evaluation criteria were used in the selection process. The ROD specifies ICs required to support cleanup and postremediation activities. After the ROD is issued, a scope of work and a remedial design/remedial action (RD/RA) work plan is developed to describe implementation of the selected remedy. In accordance with CERCLA § 120 and the INEEL FFA/CO, the RI/FS, proposed plan, and ROD are finalized via consultation among NE-ID, EPA, and IDEQ.

1.1.3 Sitewide IC Requirements

The requirement to develop comprehensive sitewide ICs was established by agreement of NE-ID, EPA, and IDEQ in the *Record of Decision for the Experimental Breeder Reactor-1/BORAX Reactor Experiment Area and Miscellaneous Sites* (WAG 6 OU 6-05 and WAG 10 OU 10-04) (DOE-ID 2002). The control requirements are specific for WAG 6, WAG 10, and sitewide. Section 11.2 of the ROD specifies that this IC plan address the following:

- "A comprehensive listing of all areas or locations in WAG 6 and 10 and all other areas and locations on the INEEL that have or will have ICs for protection of human health or the environment. The information on the list will include, at a minimum, the location of the area, the objectives of the restriction or control, the time frame for which the restrictions apply, and the tools and procedures that will be applied to implement the restrictions or controls and to evaluate the effectiveness of these restrictions or controls."

- "Identification, made legally binding where appropriate, of all entities and persons, including but not limited to, employees, contractors, lessees, agents, licensees, and invitees relevant to INEEL and WAGs 6 and 10 institutional controls."

- "Identification of all activities, and reasonably anticipated future activities, including, but not limited to, future soil disturbances, routine and non-routine utility work, well placement and drilling, grazing activities, groundwater withdrawals, paving, construction, renovation work on structures. or other activities that could occur on INEEL CERCLA sites with ICs."

- "A tracking mechanism that identifies all land areas under restriction or control."

- "A process to promptly notify both EPA and the State of Idaho before any anticipated change in land-use designation, restriction, land users, or activity for any IC required by a decision document."

- "... incorporate by reference the INEEL Land Use Plan, DOE/ID-10514, installation maps, a comprehensive permitting system, and other installation policies and orders.

- "Identify a point of contact; provide six-month notification of transfer, sale, or lease of property; and obtain EPA and IDEQ concurrence prior to deletion or termination of institutional controls."

The ROD also commits NE-ID to notify EPA and the IDEQ immediately upon discovery of any activity that is inconsistent with IC objectives or upon discovery of a change in land use or land-use designation. For the purposes of this plan, timely notification for minor inconsistencies will be considered adequate if NE-ID makes the notification during the routine (e.g., weekly) remediation conference call immediately after discovery of an inconsistency. If an inconsistency is considered to be a significant issue, then NE-ID will notify EPA and IDEQ by telephone, fax, or email within two working days of the discovery. These time frames should allow NE-ID enough time to obtain additional information about the inconsistency and prepare the pertinent information for discussion with the agencies. See Section 4.4 for a description of potential failure conditions.

The ROD also specifies that the ICs assessment report must contain, at a minimum, the following:

- "A description of the means employed to meet IC requirements"

- "A description of the means employed to meet waste site-specific objectives, including results of visual field inspections of all areas subject to operable waste-specific restrictions"
- "An evaluation of the effectiveness of the approach at meeting all WAG-wide IC requirements and waste site-specific objectives"
- "A description of any deficiencies and the approach and efforts or measures that have been or will be taken to correct problems."

This plan addresses the requirements stated above and demonstrates how NE-ID will implement and maintain the IC requirements specified in CERCLA decision documents. This plan will be reviewed after each routine-assessment reporting period and revised, as necessary, to address new IC requirements and/or significant changes in the IC requirements. Minor or insignificant changes will be agreed upon with the agencies and implemented only after agreement with the agencies. The discussions and agreement for minor changes will be documented in the minutes of the routine (e.g., weekly) remediation conference call. In accordance with the OU 10-04 ROD, DOE/ID-10980 (DOE-ID 2002) requirement to develop an INEEL-wide IC plan, this plan will integrate previously issued CERCLA IC plans and the portions of CERCLA operation and maintenance plans that include ICs. Refer to Appendix B for a listing of these documents.

1.1.4 Timing of Institutional Controls Application

The INEEL Environment, Safety, Health, and Quality Assurance (ESH&QA) and Security programs, which comply with DOE orders and policies, provide the basis for the ICs that are in place. The INEEL ESH&QA and Security programs include the work control processes and procedures for safely performing work and protecting workers, the public, and the environment from physical and radiological hazards. These programs require that hazards be identified and necessary reviews and approvals be obtained before initiating work.

CERCLA decision documents directly or indirectly specify IC requirements. The ICs that may be required before remediation will depend on the potential risks associated with the hazards and may include limiting access to waste sites to prevent unauthorized disturbance of a site before remediation begins. NE-ID may also be required to post warning notices and control human access to contaminated waste sites before, during, and after remediation. The ICs remain in effect as required by each decision document.

Once the decision process is complete and the remedy implementation process begins, additional ICs may be required for the continued protection of workers, the public, and the environment because of additional risks posed by the process. The ICs required during remediation are specified in applicable CERCLA decision documents. In addition, access and training required by INEEL security and safety systems typically limits access to personnel who are properly trained and understand the necessary protective measures.

The ICs required after remediation may be specified in final CERCLA decision documents for the respective OUs and are based on a number of factors, including an evaluation of residual contamination, the spatial location of that material (e.g., at surface or at depth), reasonably anticipated future human land uses, and environmental impacts. If, upon completion of a selected remedy, unrestricted human use and unlimited human exposure cannot be guaranteed, then required ICs will protect human health and the environment. Additional land-use controls may be necessary to prevent further environmental impacts (e.g., construction of new wells in support of residential or agricultural activities may require irrigation restrictions to prevent additional degradation of groundwater). The CFLUP presents details on how ICs are implemented during these remediation phases.

2. INSTITUTIONAL CONTROL BACKGROUND

In 1989, the EPA proposed listing the then Idaho National Engineering Laboratory (INEL) on the National Priorities List (NPL) of the National Oil and Hazardous Substances Contingency Plan. The EPA issued a final ruling that listed the INEL as an NPL site in November 1989 (54 FR 134). As a result, the present INEEL Site became subject to the requirements of CERCLA § 120, governing remedial actions on federal facilities on the NPL. The FFA/CO and associated action plan (DOE-ID 1991) were developed to establish the procedural framework and schedule for developing, prioritizing, implementing, and monitoring response actions at the INEEL Site in accordance with CERCLA, RCRA, and the Idaho Hazardous Waste Management Act (HWMA) (HWMA 1983). To manage environmental investigations, the INEEL Site is divided into 10 WAGs (Figure 2-1). Identified contaminant CERCLA sites within each WAG were grouped into OUs to expedite the investigations and any required remedial actions.

The IC requirements specific to particular waste sites are included in the CERCLA decision documents. The ICs may be specified in RODs, ROD amendments, ESDs, and other CERCLA decision documents. Appendix A presents a complete list, by WAG, of the ICs required by existing CERCLA decision documents. The ICs for a particular waste site are required for the length of time specified in the corresponding CERCLA decision document. NE-ID may implement site safety and security requirements under the Atomic Energy Act of 1954 (42 USC 2011 et seq.) that may satisfy IC requirements.

This plan explains how NE-ID will implement and maintain the OU-specific IC requirements on a sitewide basis. This sitewide IC plan will be reviewed annually and updated, as necessary, on a five-year basis in conjunction with the five-year review cycle. If the IC requirements change significantly from what is presented in this plan, the changes will be recorded in a timely fashion in the CFLUP electronic database, with agency notification. When a new or modified ROD is issued, the new individual sites and ICs will be included in Appendix A of this document and in the CFLUP. The ICs described in the following sections of this plan will be used as the basis for establishing future ICs at the INEEL.

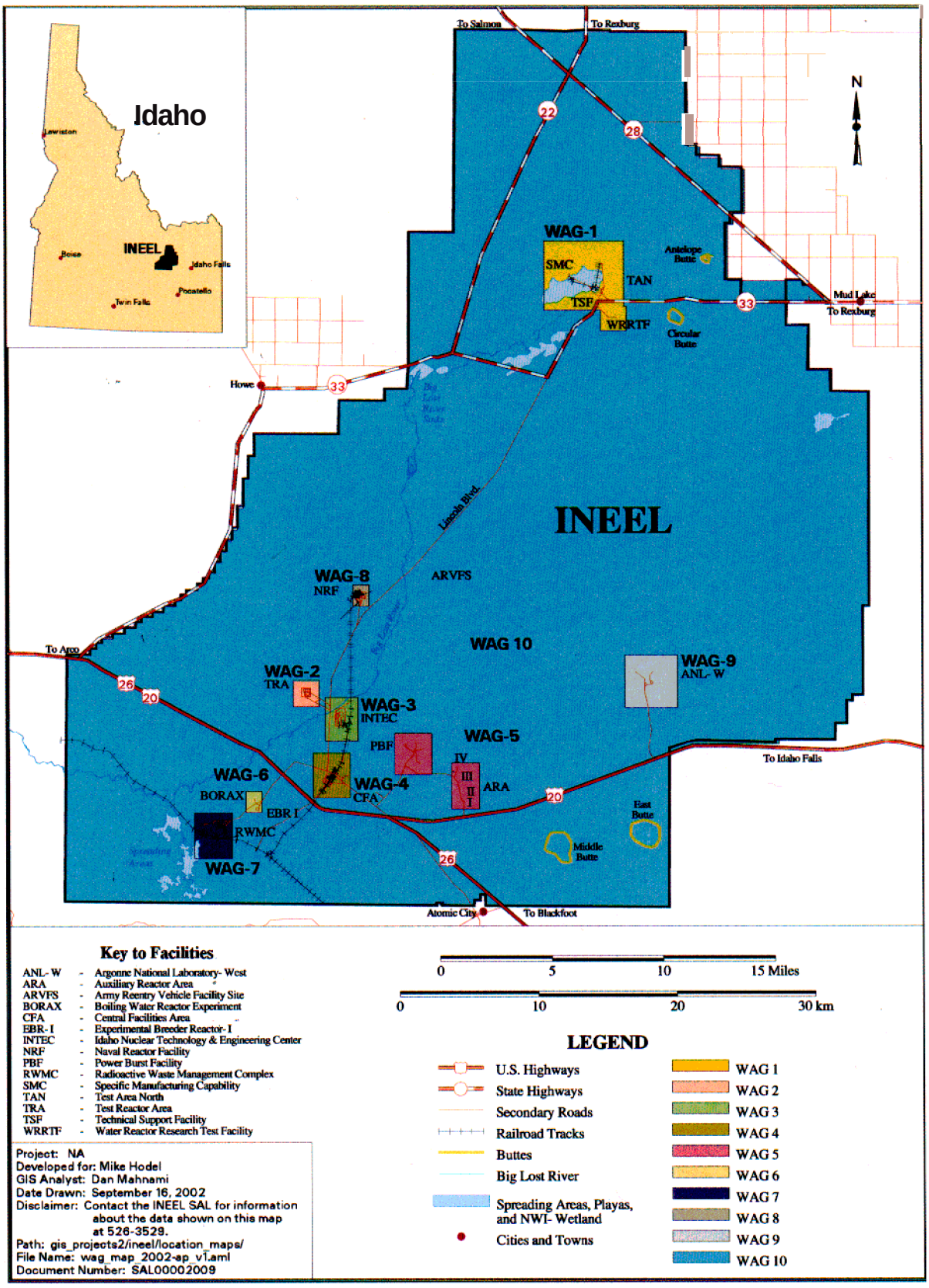

Figure 2-1. INEEL Site map showing WAG locations.

3. INSTITUTIONAL CONTROLS

The ICs that can be used within each WAG or OU are described in this section. Table 3-1 summarizes the required ICs and their individual components as described in CERCLA decision documents, IC documents, and in the CFLUP.

Table 3-1. **Summary of INEEL institutional controls.**

Institutional Control	Control Components
Visible Access Restrictions	Warning signs
	Permanent markers
Control of Activities	A r iin ative control cc es
	Public ti
	[OE or ie policy
	DC E ID directive on institutior controls
	P ll i f l boun i in IN CFLUP
Prevention of Unauthorized Access	Warning signs
	Barrie s
	Mana ement control prc dures
Land Use Restrictions	Property lease or transfer covenants (CERCLA § 120(h))
	Deed restrictions and restrictive covenants (when transferred from Federal ownership)
	Zoning ordinances (after transfer from Federal ownership)
Notice to Affected Stakeholders	A pro to promptly notify the stakeholders if any a nge in land-use de restrictions land users, or activities for any ins u tr i ir by a decision t
	This otificati may include written d tati , public announcements, or another type of information dissemin on

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3.1 Visible Access Restrictions

Visible access restrictions are those ICs that restrict personnel access at a specific CERCLA site. These restrictions may include barriers, permanent markers, or warning signs. Warning signs or a combination of signs and boundary identifiers are sufficient to warn individuals that they are approaching an area controlled for CERCLA site hazard(s) protection. While the EPA does not consider warning signs to be institutional controls, they may be part of a layered approach to preventing disturbance of a CERCLA site. Appendix C has an example of a warning sign for a CERCLA site at the INEEL Site.

3.2 Control of Activities

Control of activities includes those ICs that deal with the administrative controls relating to a CERCLA site. These ICs will cover all entities and people including, but not limited to, employees, contractors, lessees, and visitors who access a controlled CERCLA site. Although routine trespassing is unlikely during DOE operations, trespassers will be included. The ICs will cover all activities and reasonably anticipated future activities including, but not limited to, any soil disturbance, routine and nonroutine utility work, well placement and drilling, recreational activities, groundwater extraction, paving, training activities, construction, and renovation work on structures, or other activities that might occur at a CERCLA site. These controls include, but are not limited to, the following:

- INEELCFLUP
- Public notices
- DOE orders, directives, and policy
- National Environmental Policy Act (NEPA) requirements
- Facility-specific administrative and work controls.

3.3 Prevention of Unauthorized Access

Unauthorized access to the INEEL Site is controlled under the authority given in 10 CFR 860, "Trespassing on Department of Energy Property." At both the INEEL and the individual facilities (e.g., INTEC, RWMC, TRA), identification badges are required. Any member of the general public who visits the INEEL Site or individual facility must pass through visitor control and be escorted by authorized personnel. Some locations at the INEEL Site may be accessed without crossing a guard station and presenting identification badges. However, all access points to the INEEL Site are marked with "No Trespassing" signs, which are warning signs.

Sites that pose a radiological exposure risk to personnel or visitors are physically and administratively controlled so only trained radiation workers can access the sites, as designated under 10 CFR 835, "Occupational Radiation Protection." Worker exposure also is maintained as low as reasonably achievable (ALARA). In addition, sites that potentially pose a hazardous materials exposure risk to personnel or visitors are administratively controlled to ensure that only trained workers (29 CFR 1910.120) can access the sites.

3.4 Land Use Restrictions

The INEEL CFLUP, DOE/ID-10514 (DOE-ID 1997a) provides a listing of facility and land use restrictions at the INEEL. The restrictions fall into several time frames; remediation pending, remediation in progress, remediation complete, post operations under DOE control, and post-DOE (or government) control. These time frames capture the present state of operation at or around a specific CERCLA site and the applicable restrictions. Subsequent time frames are also described in the CFLUP with the anticipated future restrictions. The column "Time Frame" in Appendix A of this document is intended to indicate the current applicable time frame.

The CFLUP will support this institutional control plan by providing a tracking mechanism of land uses and institutional controlled sites. The CFLUP (DOE-ID 1997a) land-use planning assumptions originally adopted in 1995 are listed below:

1. The INEEL will remain under government management and control for at least the next 100 years. The implementation of this management and control becomes increasingly uncertain over this time period. Regardless of the future use of the land now occupied by the INEEL, the federal government has an obligation to provide adequate institutional controls (i.e., limit access) to areas that pose a significant health and/or safety risk to the public and workers until that risk diminishes to an acceptable level for the intended purpose. Achievement of this obligation hinges on the Congress appropriating sufficient funds to the responsible government entity charged to maintain the institutional controls for as long as necessary and as long as the federal government of the United States remains viable.

2. Advances in DOE and private-sector research will result in the obsolescence of existing facilities. It is further assumed that new facilities will need to be constructed in response to the need to provide state-of-the-art research facilities. Other programs, however, will be discontinued entirely after the facilities become obsolete.

3. New construction may include structures in existing facility areas; other new construction may require the development of new facility areas. New development should be restricted to core areas already developed.

4. As contaminated facilities become obsolete, decontamination and decommissioning will be required. Similarly, contaminated areas will require remediation. The decontamination and decommissioning process will commence following closure of a facility once it has been determined that the facility is no longer needed and sufficient funds are appropriated to safely accomplish the work.

5. To the extent practical, new development will be encouraged in developed facility areas to take advantage of existing infrastructures. Such redevelopment will reduce environmental degradation associated with construction activities in previously undeveloped areas.

6. The Central Facilities Area will remain the focal area for support and infrastructure activities, assuming continuity of existing or similar INEEL missions.

7. Environmental restoration and waste management activities will continue. Cleanup of hazardous, mixed, and low-level waste sites is expected to be completed within ten (10) years following completion of a Record of Decision for the cleanup mandated by the Comprehensive Environmental Response, Compensation, and Liability Act.

8. Research and development facilities will be expanded to accommodate "new frontier research." To support such efforts, cooperative partnerships between the public and private sectors may be developed to achieve mutual goals. This could result in the re-use of INEEL facilities by private-sector interests, supplemented with technology support by INEEL personnel.

9. INEEL may be called upon to support defense-related operations.

10. Regional development trends will be closely related to activities at the INEEL. The weight of INEEL's influence on the region may increase or decrease over time depending on the diversity and strength of the regional economy.

11. No residential development (i.e., housing) will occur within INEEL boundaries. Grazing will be allowed to continue in the buffer area.

12. No new major, private developments (residential or nonresidential) on public lands are expected in areas adjacent to the site. There is uncertainty about the applicability of this assumption to privately held land. Beyond 25 to 50 years, there is less certainty about this assumption.

13. An 890 mi^2 site dedicated to nuclear research, development, testing, evaluation, and environmental management is irreplaceable. It was therefore assumed that it is unlikely that the siting of a similar DOE facility and land withdrawal would occur in the future at any other location in the contiguous 48 states.

14. New locations for low-level waste disposal may need to be sited. If new locations are needed, they will be subject to regulatory approval processes.

15. In accordance with DOE Order 1230.2, DOE recognizes that a trust relationship exists between federally recognized Tribes and the DOE. DOE will consult with Tribal governments to assure that Tribal rights and concerns are considered prior to DOE taking actions, making decisions, or implementing programs that may affect the Tribes."

The INEEL CFLUP CERCLA module includes ICs that deal with land use. Maps will be available for site workers to locate the institutional controlled areas, and the access/work control procedures will refer to these maps. The CFLUP will be used as a tracking mechanism for changes to land use and land use controls. The CERCLA module of the CFLUP for institutional controlled areas will be reviewed and updated as necessary, to reflect changes in land uses and ICs that deal with land use. Agency-approved methods for public dissemination of information, such as fact sheets, will be used to notify the public of any change in land use designation, restriction, land users, or activities.

3.5 Notice to Affected Stakeholders

The preferred future land uses for the INEEL Site, as listed in the CFLUP, were identified through a stakeholder process that included a public participation forum, a public comment period, and the INEEL Citizens Advisory Board. The public participation forum was established in 1996 to discuss and review development of the long-term land use scenarios and to identify regional planning issues that could affect the scenarios. The forum membership included members from local counties and cities, the Shoshone-Bannock Tribes, the BLM, the NE-ID, the U.S. Forest Service, the U.S. Park Service, the Idaho Department of Transportation, the Idaho Department of Fish and Game, and eight business, education, and citizens' organizations. The EPA and the IDEQ participated in an ex officio capacity.

The long-term land use team used the planning assumptions and constraints to project the likely INEEL Site configuration in 25-, 50-, 75-, and 100-year scenarios. While the 100-year scenario was used for planning purposes, there are no identified changes in land use at the INEEL Site that are planned beyond the 100-year scenario. Over time, the planning assumptions and resulting long-term scenarios may need revision due to unforeseen developments and/or changing assumptions. Accordingly, the constraints, assumptions, and scenarios will be revised as necessary during updates of the CFLUP.

New projects and/or major land use changes at the INEEL Site will be coordinated with affected neighboring federal land management agencies, state resource management agencies, tribal agencies, private land owners, and the public.

Affected stakeholders must be notified before CERCLA sites with remaining contaminants have any changes in land-use designation or restriction. The specific stakeholders include, but are not limited to, the following:

- BLM
- Shoshone-Bannock Tribal Council
- U.S. Fish and Wildlife Service
- Local county governments
- State of Idaho
- EPA.

4. METHODOLOGIES AND PROCEDURES

This section describes the methodologies and overall procedures for implementing, maintaining, and evaluating the effectiveness of ICs for the CERCLA sites included in this plan. EPA guidance dictates that it is not the intent of institutional controls to add substantial administrative burden to federal facilities that have existing procedures, policies, orders, instructions, or plans (EPA 1999). Therefore, only outlines of certain existing procedures related to ICs are provided in this section.

4.1 Visible Access Restrictions

Visible access restrictions are those ICs that restrict personnel access at a specific CERCLA site. Visible access restrictions may include barriers, permanent markers or warning signs. Warning signs are the predominant method of access restriction at the INEEL Site. They identify the location of CERCLA sites to any persons who may intentionally or inadvertently enter or disturb a site. Warning signs will be posted at sites when residual contamination at the site may pose a current or future risk to human health or the environment if excavated or otherwise disturbed. A site at the INEEL may not need to be posted with a warning sign if the site does not pose an unacceptable risk to workers, the public, or the environment.

New sites that are identified at the INEEL may be posted with warning signs prior to being subject to a final record of decision. These sites will be tracked on an internal database and will be included in the CERCLA module of the CFLUP when subject to a record of decision. Signs for new sites must reflect the requirements of this plan.

Warning signs will provide, as a minimum, information on the principle hazard(s) at the site, the media of concern, a point-of-contact with phone number, and a warning to not disturb the area unless authorized. The point of contact for the INEEL is the Warning Communications Center, which will coordinate any calls to Long-Term Stewardship contact persons as needed or to contact persons in the related WAG. The potential hazard(s) information will be generalized (e.g., organics, inorganics, radionuclides, PCBs, asbestos, or ordnance) without identifying specific chemicals or radionuclides. The CERCLA warning signs shall be orange in color and the format of the signs shall be consistent throughout the INEEL Site. Appendix C provides an example of a current warning sign at the INEEL Site.

Placement and frequency of warning signs should be sufficient to prevent inadvertent access to a site. While the configuration of CERCLA sites varies greatly at the INEEL and exceptions will occur, the following guidelines may be used in determining the placement of signs:

- Signs will be clearly posted.
- Sign(s) will be visible from any normal avenue of approach.
- Signs will be placed at normal approach points.
- Signs may be placed intermittently along the boundary of a site.
- The effect upon visibility from opening doors or other changes in configuration will be considered when posting warning signs.

- At least one sign may be placed on each side of an area's boundary.

- Warning signs will be securely affixed and located so that signs and labels can be expected to remain in place.

At sites where the sign location may interfere with traffic patterns or be inaccessible due to geographic restrictions, the signs will be placed such that they best advise personnel of the presence of a hazard. In some cases, signs will be placed near but not on the site. Signs may include a map showing the configuration of the CERCLA site and adjacent buildings and structures. Signs and labels will be built to endure expected environmental conditions. Signs will not include references to coordinates. Existing signs will be replaced on an as-needed basis and must reflect the requirements of this plan.

When needed to control or restrict access to a CERCLA site or designate the limits of the CERCLA site, boundary identifiers will be used. Boundary identifiers to restrict access, if necessary, may consist of fences, ropes, chains, and color-coded adhesive tape. Boundary identifiers to provide permanent location reference points will include permanent surveyed corner markers, or other material sufficient to delineate the boundary of the area. Where existing physical barriers, such as fences or walls, may be used as boundary identifiers, the warning signs should identify the CERCLA restrictions and control access as necessary. Fencing may exist at certain sites but should not be considered as the institutional control. Fences that may be a component of a remedial activity at a site will be manage as part of an operations and maintenance plan for that site.

4.2 Control of Activities

4.2.1 INEEL Comprehensive Facilities and Land Use Plan

The CFLUP will serve as a comprehensive listing of all areas or locations on the INEEL Site that have or will have ICs for protection of human health or the environment. The information will include, as a minimum, the location of the area, the objectives of the restriction or control, the time frame for which the restrictions apply, and the tools and procedures that will be applied to implement the restrictions or controls. The annual institutional controls assessment will assess if the controls or restrictions listed in the CFLUP are effective and sufficient for each site. The CFLUP shall also track or include by reference any permitting changes, renovation work on structures, well placement and drilling, construction, or other activities that could occur on INEEL CERCLA sites with ICs. The CERCLA module of the CFLUP is available at http://cflup.inel.gov.

The INEEL CFLUP will be revised as needed, and will complement this plan in tracking land use changes. Those portions of the CFLUP that contain specific information considered sensitive for security reasons are currently available for official use only by DOE or its subcontractors at the INEEL Site.

4.2.2 Public Notices

Stakeholders are individuals, groups, and organizations who believe that they may be affected by transferring or leasing of INEEL property. The stakeholders currently considered most actively interested in INEEL activities are Shoshone-Bannock Tribes, INEEL employees, Coalition 21, Environmental Defense Institute, INEEL Citizens Advisory Board, Snake River Alliance, Keep Yellowstone Nuclear Free, and the news media. Public communication and involvement will be geared to offer opportunities to all stakeholders. For land use changes and property leasing or transfer, the community relations department is responsible for contacting the stakeholders and providing news media with the appropriate information.

4.2.3 Department of Energy Directives

Department of Energy directives include policies, orders, notices, manuals, and guides intended to direct, guide, inform, and instruct employees in the performance of their jobs and enable them to work effectively within the DOE and with regulatory agencies, contractors, and the public. Department of Energy directives are legally binding on NE-ID, and on all of its contractors by inclusion into their contract. New orders or changes must be added to List B of the contract. Future directives and guidance concerning restricting groundwater use and access are being considered for the INEEL Site as part of the evaluation of controls to protect human health and the environment. These may include additional well-drilling restrictions or easements for monitoring, restrictive covenants, or land withdrawal documentation that would be deemed necessary to further protect the public and the environment if land use or ownership changes.

Activities involving water wells are subject to regulatory processes, such as under CERCLA remedial investigation and remedial action monitoring, RCRA Treatment, Storage, or Disposal (TSD) Unit monitoring, the Safe Drinking Water Act, or environmental impact analysis under NEPA. Potable water supply well construction procedures must adhere to the Idaho Department of Water Resources construction standards and the substantive requirements of well permitting under Idaho Administrative Procedure Act (IDAPA) 37.03.09.

4.2.4 National Environmental Policy Act Requirements

The NE-ID, in accordance with DOE O 451.1B (NEPA Compliance Program), requires that all federal actions subject to NEPA (42 USC 4321 et seq.) receive appropriate evaluation, depending on the magnitude of the potential impacts on the human environment. DOE O 451.1B is the DOE order that implements the Council on Environmental Quality regulations implementing the procedural provisions of NEPA (40 CFR 1500-1508) and the DOE NEPA implementing procedures (10 CFR 1021). Additional requirements for the NEPA process at the INEEL are identified in company procedures, the overall Bechtel BWXT Idaho, LLC (BBWI) environmental management system/ISO 14001 and DOE-ID M 451.A-1. The purpose of the NEPA evaluation is to identify the environmental impacts of a proposed action including reasonable alternatives and, if possible, the mitigation of adverse impacts. For example, a NEPA evaluation is performed for proposed activities such as drilling new potable water supply wells or modifying such wells or water supply systems. NEPA evaluation requirements apply to activities conducted on behalf of NE-ID by the maintenance and operations contractor (e.g., BBWI), subcontractors, lessees, or any government entity such as the United States Geological Survey. The NEPA evaluation would assess the proposed activity to identify any restrictions on disturbance of environmental media, on well drilling, on management of waste, or subsequent water-use restrictions related to aquifer contamination.

The NEPA documents prepared to evaluate the impacts range in complexity from an environmental checklist (EC) (minor activities that have been determined by regulation to have no significant environmental impacts), to an environmental assessment (the significance of environmental impacts needs to be determined), to an environmental impact statement (major Federal activities with significant environmental impacts). Appendix D includes an example of an environmental checklist.

The NEPA process for a proposed action and identification of potential impacts is typically initiated with an EC prepared for review and approval. Information provided in the EC includes detailed information concerning the environmental aspects and potential sources of impact, including information on the potential disturbance of a contaminated site. During EC technical review, an appropriate NEPA specialist evaluates the information. The NEPA review and approval process ensures that applicable

environmental requirements associated with the project have been identified and that the project will comply with requirements.

In accordance with the June 1994 Secretarial Policy on the National Environmental Policy Act, the Department of Energy will rely on the CERCLA process for review of actions to be taken under CERCLA. CERCLA activity documents incorporate NEPA values to the extent practicable, and are made available to the public in accordance with the requirements of CERCLA.

4.2.5 Work Control Process

All work at the INEEL Site is controlled through the "Integrated Work Control Process" (STD-101). The integrated work control process is the method by which the Integrated Safety Management System (ISMS), enhanced work planning, and Voluntary Protection Program (VPP) are implemented. This process details the initiation, development, and approval of the work controls for certain projects at the INEEL site. The work control process identifies specific regulatory requirements for work activities, environmental management requirements, radiological control requirements, safety and industrial hygiene requirements, and training requirements associated with a specific location. ICs are part of the regulatory/environmental management requirements.

Institutional controlled CERCLA sites with potential radiological exposures require written authorizations for entry into and work within radiological areas (10 CFR 835.501(d)). Records of these authorizations are maintained, per 10 CFR 835.701(a), to help its operating entities comply with the requirements of 10 CFR 835 and DOE G 441.1. This series of guides is structured to help radiation protection professionals develop the documented radiation protection program required by 10 CFR 835.101 and the supporting site- and facility-specific policies, programs, and procedures necessary to ensure compliance with the related regulatory requirements. DOE STD-1098-99, "Radiological Control," supplements DOE G 441.1 and serves as a secondary source of guidance for complying with 10 CFR 835.

4.2.6 Notification of Soil Disturbance Process

In the case of WAG 3 OU 3-13, soil disturbances at Idaho Nuclear Technology and Engineering Center (INTEC) are controlled through an additional notification of soil disturbance (NSD). Any soil disturbance must be pursuant to agreement by NE-ID, EPA, and IDEQ. This NSD process applies only to INTEC and is not intended or required to be used at any other location on the INEEL. Any soil disturbances at INTEC must be within the requirements established under the WAG 3, OU 3-1, ROD to ensure that a disturbance does not interfere with remedial actions identified in the ROD and that remedies remain operational and functional. The established soil disturbance procedure is required for planned disturbance, excavation, and management of soil within WAG 3. The procedure applies to all resources involved in actions that may cause a soil disturbance at a CERCLA site at INTEC and within WAG 3, OU 3-13, and defined area of contamination. The overall procedure for initiating a soil disturbance is as follows:

- Review the INTEC controlled drawing of controlled areas to determine which CERCLA site will be affected by the activity
- Prepare an abbreviated activity summary that includes, at least,
- Description and location of the activity
- Soil quantities and maximum depths

- Soil sampling requirements
- Fate of soil
- Prepare a proposed schedule for the activity.

NE-ID is responsible for reviewing the proposed activity and subsequently completing an NSD package. Prior to any site disturbance activities, the agencies will ensure that remedies identified in the ROD remain operational, functional, and unimpeded (DOE-ID 1999a). Appendix E details the soil management strategy process for soil disturbances.

4.3 Access Control

Unauthorized access to the INEEL Site is controlled under the authority given in 42 USC 2278a as implemented by 10 CFR 860, "Trespassing on Department of Energy Property." The INEEL facilities require identification badges to enter. Any member of the general public who visits the INEEL Site must pass through visitor control, obtain a visitor pass, and be escorted by authorized personnel. The NE-ID maintains a security force responsible for controlling access to all INEEL facilities. The access control procedures used by the security force can be found in:

- DOE O 470.1, Change 1, Safeguards and Security Program
- DOE O 470.1, Attachment 1, Contractor Safeguards and Security Program Requirements
- DOE M 473.1-1, Physical Protection Program Manual.

Sites that pose a radiological exposure risk to personnel or visitors are physically and administratively controlled so that only trained radiation workers can access the sites, as designated under 10 CFR 835, "Occupational Radiation Protection." Worker exposure is also maintained under the ALARA program. Physical controls for accessing CERCLA sites posing radiological hazards include warning signs, fences, barriers, and boundary markers detailed in Section 4.1. Administrative controls include radiation work permits (RWPs) and personnel training.

4.4 Leasing or Transferring Property

It is not anticipated that the land within the INEEL Site will be leased or transferred at least up through the year 2095. The Hall Amendment of the National Defense Authorization Act of 1994 (Public Law 103-160, § 3154) requires concurrence from EPA on the lease of any NPL sites during the period of NE-ID control. NE-ID will also, to the extent practicable, seek to use the standards in the EPA's "Interim Final Draft Policy Institutional Controls and Transfer of Real Property under CERCLA Section 120(h)(3)(A) (B) or (C)" (EPA 2000a).

CERCLA (42 USC 9620 [h][3]) requires that NE-ID indicate in property transfer deeds the presence of contamination and any restrictions on use of the property due to such contamination. The NE-ID will notify the EPA and the IDEQ as soon as NE-ID decides to seek a lease or other real property transaction affecting any property subject to ICs so that the EPA and the IDEQ can be involved in discussions to ensure that appropriate provisions are included in the conveyance documents to maintain effective ICs. Portions of the INEEL Site are located on land withdrawn from public domain by Public Land Orders 318,545, 637 and 1770. The land withdrawn under these orders accounts for approximately

89 percent of the current INEEL Site. The NE-ID owns the balance of land that was obtained from private parties or the State of Idaho.

4.4.1 Transfer to Management by Other DOE Programs or Other Federal Agencies

The ICs put in place pursuant to CERCLA will continue without modification or interruption following transfer of any part of the INEEL Site to another government program or entity. All primary documents bind the federal government, not a single element of that government. Neither NEPA nor other environmental laws would require any new action in connection with such an intra-DOE transfer of responsibility.

4.4.2 Lease of Property to a Non-Federal Entity

INEEL land that may be leased to a non-federal entity will require NEPA evaluation. The application of NEPA would be triggered by a need to examine the environmental impacts of the lessee's proposed activities on the property. The significance of the impacts, and the level of NEPA analysis, would be tied to the size and duration of the lease and the character of activities on the premises. For example, industrial uses that involved hazardous materials, either radioactive or chemical, would tend to increase the potential impact toward significance and the level of analysis toward an environmental impact statement. Impacts of the lessee's activities on the residual contamination and the remedy that has been installed would also be considered. For example, business activities that required excavation of soils for utility lines or drilling of water supply wells could interfere with some kinds of ICs.

The condition of all INEEL CERCLA sites is documented and that documentation will be included in any lease agreement for property that is known to be contaminated and has identified ICs. Use of property may bring non-federal and non-prime contractor employees into contact with contamination from site sources. Information about the total condition of the site and all known risks will be provided to the lessee of any property on the INEEL Site. NE-ID will assure that employees of any lessee are informed of hazards.

Under Section 3154 of the Fiscal Year 1994 National Defense Authorization Act (Public Law 103-160), amending 42 USC 7256(e)(1) and (e)(2), a lease of real property at the INEEL, as a facility listed on the Superfund NPL, requires NE-ID to request EPA consultation on the environmental suitability of the premises for leasing, and to obtain EPA concurrence, either explicitly or through failure to respond in 60 days.

In the narrow circumstance where a lease term for premises with a history of contamination (which is the case for an area subject to an IC) would extend past a permanent termination of all NE-ID activities at the INEEL, then CERCLA § 120(h)(5) requires NE-ID to notify the State of Idaho of the nature of the lease and the lessee's activities.

4.4.3 Reversion of Property in Accordance with the Original Conveyance to the Federal Government

If a parcel of land within the INEEL Site was not obtained by negotiated purchase or condemnation, but rather through donation by a private or State entity to the Federal government (motivated by altruism, tax deductions, or expected beneficial collateral development), then it is possible that such a conveyance would include a reversionary clause, in which legal title to, and the right of possession of, the premises would revert automatically to the prior owner should (for example) the Federal government cease using the land for the original intended purpose. If we assume there is no ambiguity that the condition subsequent that triggers reversion is actual abandonment of the property by

the Federal government, then the presence of residual contamination in the soil or groundwater, and the need to maintain an IC to protect human health and the environment, should be sufficient basis to maintain Federal possession should NE-ID assert it.

Given the entire unpredictable chain of consequences that would ensue, it seems that holders of reversionary interests in contaminated sites subject to ICs may wish to make a gift of their reversionary interest to the Federal government, so they are not burdened with these costs. NE-ID likewise may seek to have such reversionary interests extinguished for much the same reason.

4.4.4 Relinquishment of Possession Back to the Public Domain

This is the normal path for disposition of property that has been withdrawn from the public domain for the use of a specific Federal agency, and is no longer needed by that agency. See, for example, 40 USC 472, which is implemented by 43 CFR 2372.1, which states that "Agencies holding withdrawn or reserved lands which they no longer need will file…a notice of intent to relinquish such lands." Similarly, the Federal Property and Administrative Service (FPAS) Act, which normally governs disposition of property that is excess to the needs of the current possessory agency and surplus to the needs of the Federal government, carves out an exemption for withdrawn lands (43 CFR 2370.0-3), "except land or portions of land" that is determined to be "not suitable for return to the public domain…because the lands are substantially changed in character by improvements or otherwise." It seems likely that withdrawn lands that are the subject of continuing ICs will therefore be moved over into the normal FPAS disposal process, discussed in the next section below.

Before the BLM will accept land back into the public domain, where there is normally unrestricted public access and the land is subject to mining claims, the cited regulation asks the possessing Federal agency to state: "…(5) The extent to which the lands are contaminated and the nature of the contamination. (6) The extent to which the lands have been decontaminated or the measures taken to protect the public from the contamination and the proposals of the holding agency to maintain protective measures." Residual contamination in property subject to an IC may be determined by BLM to be "not suitable for return to the public domain." (43 CFR 2374.1) BLM regulations specifically state that "Agencies will not be discharged of their accountability and responsibility.. .unless and until (a) The lands have been decontaminated of all dangerous materials and have been restored to suitable condition or, if it is uneconomical, to decontaminate or restore them, the holding agency posts them and installs protective devices and agrees to maintain the notices and devices." (43 CFR 2374.2) Any restriction on access in an area that the public expects to be fully open to entry, including prospecting for subsurface minerals, would be difficult to maintain. Such property arguably has been "substantially changed in character."

Even though this regulation would allow continuation of an IC seeking to control entry on relinquished land, the effectiveness of the IC under those circumstances would be problematical. If the NE-ID must continue to maintain the IC, it may be more economical to retain possession of the land until the IC is no longer necessary. The need to maintain an IC to ensure the continuing effectiveness of a remedial action would support a conclusion that the property in question is still "needed by that agency," and that relinquishment is not mandatory.

Because relinquishment is a transfer to another Federal agency, there is neither a "contract for sale or other transfer," a "deed entered into for the transfer of such property by the United States to any other person or entity," nor "real property owned by the United States and on which the United States plans to terminate Federal Government operations" (CERCLA § 120(h)(1), (h)(3)(A), (h)(4)(E)). Therefore none of the requirements of Section 120(h) apply, and there is no requirement in CERCLA to provide information about the contamination or give any warranties or covenants to the receiving Federal agency. Instead, Federal agencies managing property disposal will require the same information as a prerequisite

to assuming any responsibility for the real property. While the ultimate liability remains with the United States government, a relinquishment would require BLM to ask Congress to fund any remaining costs of CERCLA compliance, either in its own budget act or as a line item in DOE's budget. This is another reason BLM may be reluctant to accept contaminated property back into the public domain.

4.4.5 Disposition as Excess Property

Preparatory to declaring a parcel of contaminated land excess to the needs of NE-ID, NE-ID would need to prepare a property report for General Services Administration (GSA) including the information required by CERCLA § 120(h) to be reported to a non-Federal transferee. As noted in the last paragraph in the previous subsection, a transfer via the Federal Property and Administration Services act by NE-ID to another Federal agency of contaminated real property that is subject to an IC, would not give the recipient agency any special protection against liability or ensure funding so that the new "owner" could maintain the IC or other aspects of the remedy. While there is no statute or regulation that specifically prevents an interagency transfer of contaminated land, such transfers are voluntary for the recipients; so another Federal agency may not volunteer unless it sees a significant compensating benefit in the property.

As an example, in the case of contaminated land at the former Rocky Mountain Arsenal outside of Denver, the U.S. Fish and Wildlife Service has determined that the assurance of funding for remediation through the Department of Defense and Shell Oil is sufficient for it to take possession of what is becoming a wildlife refuge. In fact, the control of the land as a wildlife refuge, which bars future excavation for utilities and infrastructure and any residential use, is the actual institutional control for that NPL site.

A Federal agency could, instead of taking possession itself, sponsor a "public benefit conveyance" that transfers the surplus property to a state or private entity, for a public purpose, such as a school, college, jail, or park. Again, the recipient would have to volunteer. If, on the other hand, no agency volunteered to arrange a transfer, the normal course under the FPAS would be for GSA to try to sell the property at fair market value to any non-Federal entity. Such a transfer outside of Federal ownership would trigger all of the notification and covenant requirements of CERCLA § 120(h), including a warranty that necessary remedial action is complete, and that the Federal government would complete any additional remediation that is later determined to be necessary.

The Federal courts have held that NEPA applies to a transfer of land outside of Federal ownership. The transferring agency must determine a reasonable range of alternative uses of the property, and analyze them at the appropriate level of NEPA documentation. As part of the NEPA analysis, other potentially applicable Federal laws need to be identified, such as the Federal Historic Preservation Act or the Endangered Species Act. NEPA and other statutes will trigger a need for public involvement in the transfer decision. The need to maintain the IC even after transfer would be an important issue for this analysis.

Transfer out of Federal ownership makes some kinds of direct IC management more difficult, but it also enables the Federal government to utilize land use control instruments in the private sector, including deed restrictions, restrictive covenants, and zoning and land use regulation through local government. One of the problematic issues is whether EPA or IDEQ would have the legal right to enforce restrictions in the deed, which is ordinarily reserved for the transferor or other transferees (as in a housing development).

4.4.6 Direct Sale by NE-ID to Non-Federal Entities

NE-ID has authority under 42 USC 7274q to transfer real property in order to support economic development in the community near the facility. In such a case, the discussion in the preceding section

concerning conveyance to non-Federal entities would fully apply, including the protections afforded recipients under CERCLA § 120(h), and the ability to implement ICs via conventional property conveyance instruments and local regulation of land use. The need to perform prior analysis under NEPA, The National Historic Preservation Act, and other statutes would also apply.

In addition, the cited statute authorizes (but does not mandate) the Secretary of Energy to "indemnify and hold harmless" the transferee of the property "against any claim for injury to person or property that results from the release or threatened release of a hazardous substance...as a result of Department of Energy activities." The similar indemnification statute that applies to economic development transfers of military property has been interpreted as covering liability for remedial and corrective action under environmental laws as an "injury to...property."

4.5 Response to Failed Controls/Corrective Action

Failed controls are most likely to be found during the annual assessments; however, failed controls may be discovered at any time. Subcontractors identifying a failed control will notify NE-ID as the point of contact. NE-ID will notify the EPA and the IDEQ within two business days after discovery of any major activity (e.g., unauthorized well drilling, intrusion into engineered covers, change in land use from industrial to residential) inconsistent with the specific institutional controls for a site or of any change in the land use or land use designation of a site addressed in the ROD and listed in the CFLUP. Minor inconsistencies (e.g., signs down or missing) will be resolved as necessary. If minor inconsistencies are identified during the annual assessment, they will be noted on the reports and resolution will be noted in the report.

If the NE-ID believes that an emergency exists, the NE-ID can respond to the emergency immediately before notification to the EPA and the IDEQ and need not wait for any EPA or IDEQ input to determine a plan of action. The NE-ID will identify the root cause of the IC process failure, evaluate how to correct the process to avoid future problems, and implement these changes after consulting with the EPA and the IDEQ. Table 4-1 provides the responses to failed control procedures that will be used during NE-ID control of the INEEL Site.

4.6 Changing/Terminating Institutional Controls

Institutional controls are required as long as land use or access restrictions are necessary to maintain protection of human health and the environment. New sites that are determined to require intuitional controls will be included in this plan and in the CFLUP as ROD-pending institutional control sites. The adequacy of the continued use of ICs for each CERCLA site will be evaluated during the annual IC assessments and the CERCLA five-year review process. RODs specify that ICs will be deleted or terminated during the five-year review when the parties to the FFA/CO agree in the deletion or termination. Since the CFLUP lists the required ICs at CERCLA sites, changes or terminations agreed to by the Agencies will be documented in the updated CFLUP, as well as in the updates to this plan. In this way, the CFLUP supports the requirements of the institutional controls plan in tracking ICs for the CERCLA sites.

4.7 Assessments

4.7.1 Assessments of CFLUP IC Information

The INEEL CFLUP provides guidance on facility and land use at the INEEL through the 100-year (year 2095) scenario (DOE-ID 1997a) and beyond. The CFLUP includes a CERCLA module with specific information about the INEEL CERCLA sites. The CERCLA module of the CFLUP is to include the following:

- A list of all CERCLA institutionally controlled areas with descriptions
- A list of required ICs for each CERCLA site
- The objective of the control or restriction
- The control or restriction.

Table 4-1. Land use controls and response to failed controls

Controls	Control Procedures	Surveillance to Ensure Controls in Place	Frequency of Surveillance	Response to Failed Controls
Control of activities	Statement in CFLUP indicating control of activities	Check continued process applicability	Annually until the Agencies agree to modify frequency.	Correct procedural statement.
	WAG IC sites included in the INEEL CFLUP	Check INEEL CFLUP for inclusion	Annually or as activities occur until the Agencies agree to modify frequency.	Correct deficiency in INEEL CFLUF!
	Procedures that formally review any new activity prior to proceeding	Check continued process applicability	Annually or as activities occur until the Agencies agree to modify frequency.	Correct process or procedure.
	Procedures for soil disturbance	Check continued process applicability	Annually or as activities occur until the Agencies agree to modify frequency.	Correct process or procedure.
	NEPA documentation (e.g., environmental checklists required for drilling wells into/through contaminated perched sites and/or aquifers)	Check continued process applicability	Annually or as activities occur until the Agencies agree to modify frequency.	Correct process or procedure; if unauthorized drilling is conducted, notify EPA and IDEQ. Correct deficiency.
Access restrictions	Included as part of RD/RA Posted warning signs indicating concerns at the CERCLA site	Assessment to ensure signage is in place at appropriate locations	Annually or as activities occur until the Agencies agree to modify frequency.	Correct signage.
Prohibition of unauthorized entry with signs, rope, or fences as specified, and guard gates to INEEL	10 CFR 860 (implemented through DOE orders and DOEis management and operating and security manuals)	Check continued process applicability	Annually or as activities occur until the Agencies agree to modify frequency.	Use procedures for conducting investigations of security incidents in 10 CFR 860 (implemented through DOE orders and DOE's management and operating and security manuals); if unauthorized access occurs, notify EPA and the IDEQ.
Property lease requirements	Procedural statement indicating requirements for property leasing Statement in CFLUP indicating lease requirements	Check continued process applicability and inclusion of sites within the CFLUP	Annually or as activities occur until the Agencies agree to modify frequency.	Correct process or procedures and/or deficiency in the CFLUP and notify EPA and IDEQ.
Property transfer requirements	Procedural statement indicating requirements of property transfer Statement in CFLUP indicating transfer requirement	Check continued process applicability and inclusion of sites within the CFLUP	Annually or as activities occur until the Agencies agree to modify frequency.	Correct process or procedures and/or deficiency in the CFLUF! Notify EPA and the IDEQ.
Control of Records	FFNCO	Check CFLUP for CERCLA sites and Electronic Document Management System for annual reports	Annually	Correct system to provide records

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The CFLUP will be reviewed during IC assessments to determine whether the site and requirements are current and updated as necessary. The CERCLA module of the CFLUP is available at http://cflup.inel.gov/.

4.7.2 Assessment of Visible Access Restrictions

Visible access restrictions, which will be assessed annually, may include barriers, permanent markers, and warning signs. The warning signs will be assessed to verify legibility and accuracy of sign content. Appendix A lists the IC sites and wells that require visible access restrictions, as mandated in the specific ROD. Each CERCLA site will be viewed from all normal avenues of approach to determine whether the appropriate warning signs have been placed. The assessment will be documented on assessment checklists. See Appendix F for an example of an assessment checklist.

Perimeter fencing such as chain link fencing may surround a CERCLA site. Fencing or barriers may control certain sites; however, the fencing or barriers will be a voluntary restriction placed for plant operations or as part of a remedial activity. Fences are not considered specific ICs.

4.7.3 Assessment of Control Activities

Control of activities includes administrative controls that relate to a CERCLA site. These controls include the INEEL CFLUP CERCLA module, public notices, and controls of unauthorized access. Specifically, the INEEL CFLUP will be reviewed to determine whether required controls are included as part of the documentation.

In general, if a soil CERCLA site contains radiological hazards, and may allow for spread of contamination, then site access is controlled, as designated under 10 CFR **835,** "Occupational Radiation Protection." Areas must be designated and posted according to the requirements of 10 CFR **835.** Additionally, individuals entering these areas must meet certain training requirements detailed in 10 CFR **835.**

4.7.4 Assessment of Notices to Affected Stakeholders

Land use designation, land use restrictions, and land users are not expected to change before 2095. Such changes affecting CERCLA sites controlled by ICs will be the subject of notification to affected stakeholders prior to taking effect. The community relations department will be queried to determine whether any notices were issued to stakeholders. Additionally, the CFLUP will be reviewed to determine if any land use changes were documented. The specific stakeholders include, but are not limited to the BLM, Shoshone-Bannock Tribal Council, U.**S.** Fish and Wildlife Service, local county governments, the State of Idaho, and the EPA.

4.8 Reporting

The IC assessment results will be used to develop routine annual IC assessment reports. The reports will follow EPA Region 10 IC guidance and will be submitted annually as stated in the ROD (DOE-ID 2002). Guidance is also available from EPA, including *Institutional Controls: A Site Manager's Guide to Identifying, Evaluating, and Selecting Institutional Controls at Superfund and RCRA Corrective Action Cleanups* (EPA 2000b). The suggested outline for the report is provided in Appendix G. The reports will be prepared on an exception basis. That is, the reports will summarize the assessment activities and report deficiencies. The deficiencies will be identified along with corrective actions, forecast completion dates for each corrective action, and a status of each corrective action if the specific action cannot be completed during the calendar year of the assessment. The specific site photographs and

assessment checklists will be maintained in the project file and not routinely included in the reports unless these items are needed to clarify specific text in the reports. The project file will be made available at the INEEL Site for review by the agencies as necessary to allow the agencies to verify the assessment process.

4.9 Recordkeeping

A set of the records specific to this plan will be maintained in the Surveillance, Monitoring, and Long-term Operation project files and in the FFNCO information repository. The project files for the other WAGs will include directions specifying that the records for IC assessments will be included in the Surveillance, Monitoring, and Long-term Operation project files once this plan is approved. The documentation will include, but not be limited to, the following:

- This and subsequent revisions to this institutional controls plan
- Initial IC assessment report
- Routine periodic assessment checklists and photographs (project file only)
- Routine periodic IC assessment reports
- Five-year remedy review reports.

4.10 Responsibilities

4.10.1 Department of Energy

NE-ID is primarily responsible for implementing ICs at the INEEL Site. EPA and IDEQ approve the IC requirements, in the context of remedy selection in a CERCLA remedial action decision document.

The responsibility of implementing sitewide IC requirements resides with NE-ID. Any questions regarding ICs should be directed to the FFNCO Program Manager. NE-ID will communicate with state, local, tribal, and federal government agencies. While NE-ID has responsibility for the maintenance of Institutional Controls, the actual actions that provide for implementation and maintenance are performed under contracts issued by NE-ID. As new CERCLA RODs are issued and cleanup projects progress, ICs will be implemented as described in this plan. As this plan incorporates all ICs for all WAGs covered by the IC plan, the plan will be revised as necessary to incorporate any waste site-specific controls for sites covered by new or modified RODs.

NE-ID will adhere to the IC requirements specified in CERCLA remedial decision documents and this plan by utilizing internal procedures, Federal Register (FR) notices, informational announcements, and contracts, consistent with all applicable laws, regulations, DOE orders, agreements, and consent orders. Contractors and employees are required to comply with applicable environmental laws, DOE orders, and administrative orders via contract requirements with NE-ID.

NE-ID is responsible for oversight and integration of and compliance with these institutional controls. NE-ID uses a requirements-based system that describes how NE-ID conducts work.

NE-ID executes work through the use of contractors. In accordance with DOE requirements, each contractor uses a corrective action management system to identify, track, evaluate, document, and report any necessary corrective actions. The corrective action management systems provide a systematic process to ensure corrective actions are taken for noted deficiencies.

NE-ID assumes the lead-agency role for CERCLA activities at the INEEL Site, with consultation from EPA and IDEQ under the terms and conditions set forth in the FFNCO. NE-ID is responsible for developing the following:

- Ensuring the IC activities are performed in accordance with the approved IC plan
- Ensuring relevant DOE orders, directives, and policy are enforced
- Ensuring that NEPA requirements are followed
- Ensuring that general and facility-specific work controls are adhered to
- Ensuring that site access controls are maintained
- Notifying EPA and IDEQ of failed ICs
- Initiating contact with the INEEL community relations department regarding land use changes and notifications of groundwater management restrictions (e.g. drilling)
- Implementing assessments using personnel trained to the requirements of the approved IC plan
- Implementing corrective actions to address failure of ICs, and providing updated IC and CERCLA site information to the CFLUP coordinator, as required
- Developing the annual IC assessment reports, and CERCLA five-year remedy review reports
- Ensuring document control of this institutional controls plan (includes revisions), annual IC monitoring reports, and CERCLA five-year remedy review reports, including their placement in the project file and in the information repository
- Submitting IC assessment reports to EPA and IDEQ
- Reviewing and submitting, if appropriate, NSD packages
- Posting signs and boundary identifiers at CERCLA sites requiring ICs.

4.10.2 Regulatory Agencies

EPA and IDEQ are the primary regulatory agencies that oversee INEEL Site cleanup activities in accordance with CERCLA § 120 and the FFNCO. NE-ID is required by the FFNCO to obtain agency approval and concurrence in the selected remedial action in accordance with the requirements of CERCLA § 120 and the NCP. In addition, the regulatory agencies, in accordance with CERCLA and the NCP, can review NE-ID annual assessments of ICs and the CERCLA required five-year reviews, can make recommendations, and can propose additional work or modifications to primary documents in accordance with Paragraphs 8.21 to 8.24, 15.1 to 15.4, and 22.1 of the FFNCO (DOE-ID 1991). These five-year reviews are necessary for remedial actions that leave hazardous substances, pollutants, or contaminants at the INEEL Site.

5. FIVE-YEAR REVIEWS

Section 121(c) of CERCLA, as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), requires a review every five years of sites that, after remedial actions, have remaining hazardous substances, pollutants, or contaminants. The "National Oil and Hazardous Substances Pollution Contingency Plan" (NCP) at 40 CFR 300.430(f)(4)(ii) further provides that sites that, after remedial actions, have remaining hazardous substances, pollutants, or contaminants above levels that allow for unlimited use and unrestricted exposure, be reviewed every five years to ensure protection of human health and the environment. The five-year review requirement applies to all remedial actions selected under CERCLA § 121. The NE-ID will conduct a five-year site-wide review of institutional controls in accordance with any existing regulations, policies, and guidance applicable at the time.

6. REFERENCES

10 CFR 835,2002, "Occupational Radiation Protection," *Code of Federal Regulations,* Office of the Federal Register, February 4, 2002.

10 CFR 835.2, 2002, "Definitions," *Code of Federal Regulations,* Office of the Federal Register, February 4,2002.

10 CFR 835.101, 2002, "Radiation Protection Programs," *Code of Federal Regulations,* Office of the Federal Register, February 4, 2002.

10 CFR 835.501, 2002, "Radiological Areas, " *Code of Federal Regulations,* Office of the Federal Register, February 4, 2002.

10 CFR 835.701, 2002, "General Provisions, " *Code of Federal Regulations,* Office of the Federal Register, February 4, 2002.

10 CFR 860,2002, "Trespassing on Department of Energy Property," *Code of Federal Regulations,* Office of the Federal Register, February 4,2002.

10 CFR 1021,2002, "National Environmental Policy Act Implementing Procedures," *Code of Federal Regulations,* Office of the Federal Register, February 4, 2002.

29 CFR 1910.120, 2003, "Hazardous Waste Operations and Emergency Response," *Code of Federal Regulations,* Office of the Federal Register, April 3, 2003.

40 CFR 300,2003, "National Oil and Hazardous Substances Pollution Contingency Plan," *Code of Federal Regulations,* Office of the Federal Register, May 1,2003.

40 CFR 373,2001, "Reporting Hazardous Substance Activity When Selling or Transferring Federal Real Property," *Code of Federal Regulations,* Office of the Federal Register, July 2001.

40 CFR 1500-1508, Chapter V, 2002, "Council on Environmental Quality," *Code of Federal Regulations,* Office of the Federal Register, February 6,2002.

43 CFR 2370,2002, "Restorations and Renovations," *Code of Federal Regulations,* Office of the Federal Register, February 6, 2002.

43 CFR 2372.1, 2002, "Notice of Intention to Relinquish Action by Holding Agency," *Code of Federal Regulations,* Office of the Federal Register, February 6, 2002.

43 CFR 2374.1, 2002, "Property Determinations," *Code of Federal Regulations,* Office of the Federal Register, February 6, 2002.

43 CFR 2374.2, 2002, "Conditions of Acceptance by BLM," *Code of Federal Regulations,* Office of the Federal Register, February 6, 2002.

54 FR 134, 1989, "National Priorities List," *Federal Register,* Environmental Protection Agency, p. 29820, July 14, 1989.

40 USC 472,2001, "Definitions," (for Chapter 10 – Management and Disposal of Government Property) *United States Code,* January 2,2001.

42 USC 2011 et seq., 1954, "Atomic Energy Act of 1954," as amended, *United States Code,* 1954.

42 USC 2278a, 2001, "Trespass Upon Commission Installations," *United States Code,* January 2, 2001.

42 USC 4321 et seq., 1970, "National Environmental Policy Act of 1969," January 1, 1970.

42 USC 6901 et seq., 1976, "Resource Conservation and Recovery Act (Solid Waste Disposal Act)," *United States Code,* 1976.

42 USC 7256, 2001, "Contracts, Leases, etc. with Public Agencies and Private Organizations and Persons," *United States Code,* January 2, 2001.

42 USC 7274, 2001, "Environmental Impact Statements Relating to Defense Facilities of Department of Energy," *United States Code,* January 2, 2001.

42 USC 9601 et seq., 1980, "Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA/Superfund)," as amended, *United States Code,* 1980. (Note: The amendment is cited as "Superfund Amendments and Reauthorization Act of 1986 [SARA].")

42 USC 9620, 1996, "Federal Facilities," as amended, *United States Code,* 1996.

CERCLA, "Comprehensive Environmental Response Compensation and Liability Act" Public Law 96-510, as Amended.

DOE G 441.1, 1996, "DOE Radiological Health and Safety Policy," U. **S.** Department of Energy, April 26, 1996.

DOE M 473.1-1,2002, "Physical Protection Program Manual," U.S. Department of Energy, December 23,2002.

DOE **O** 451.1B, 2001, "National Environmental Policy Act Compliance Program," U.S. Department of Energy, Change 1, September 28,2001.

DOE **O** 470.1, 1996, "Safeguards and Security Program," U.S. Department of Energy, Change 1, June 21, 1996. (Includes Attachment 1, "Contractor Safeguards and Security Program Requirement.")

DOE **O** 1230.2, 1992, "American Indian Tribal Government Policy," U.S. Department of Energy, April 8, 1992.

DOE-ID, 1991, *Federal Facility Agreement and Consent Order for the Idaho National Engineering Laboratory,* U.S. Department of Energy, U.S. Environmental Protection Agency Region 10, Idaho Department of Health and Welfare, Administrative Docket No. 1088-06-120, December 9, 1991.

DOE-ID, 1993, *Record of Decision – Declaration for PIT 9 at the Radioactive Waste Management Complex Subsurface Disposal Area,* U.**S.** Department of Energy Idaho Operations Office, October 1993.

DOE-ID, 1994a, *Record of Decision: Declaration for PAD-A at the Radioactive Waste Management Complex Subsurface Disposal Area,* U.S. Department of Energy Idaho Operations Office, February 1994.

DOE-ID, 1994b, *Record of Decision: Declaration for Organic Contamination in the Vadose Zone, (OCVZ), RWMC, INEL,* U.S. Department of Energy Idaho Operations Office, December 1994.

DOE-ID, 1995, *Record of Decision, Declaration for the Technical Support Facility Injection Well (TSF-05) and Surrounding Groundwater Contamination (TSF-23) and Miscellaneous No Action Sites Final Remedial Action,* DOE/ID-10139, U.S. Department of Energy Idaho Operations Office, August 1995.

DOE-ID, 1997a, *Idaho National Engineering and Environmental Laboratory Comprehensive Facility and Land Use Plan,* DOE/ID-10154, U.S. Department of Energy Idaho Operations Office, December 1997. (Official Use Only)

DOE-ID, 1997b, *Final Record of Decision for Test Reactor Area, Operable Unit 2-13,* DOE/ID-10586, U.S. Department of Energy Idaho Operations Office, December 1997.

DOE-ID, 1999a, *Final Record of Decision, Idaho Nuclear Technology and Engineering Center,* DOE/ID-10660, Rev. 0, U.S. Department of Energy Idaho Operations Office, U.S. Environmental Protection Agency, Idaho Department of Health and Welfare, October 1999.

DOE-ID, 1999b, *Final Record of Decision for Test Area North, Operable Unit 1-10,* DOE/ID-10682, Rev. 0, U.S. Department of Energy Idaho Operations Office, October 1999.

DOE-ID, 2000a, *Record of Decision for the Power Burst Facility and Auxiliary Reactor Area, Operable Unit 5-12,* DOE/ID-10700, Rev. *0,* U.S. Department of Energy Idaho Operations Office, January 2000.

DOE-ID, 2000b, *Explanation of Signijicant Differences to the Record of Decision for Test Reactor Area Operable Unit 2-13,* DOE/ID-10744, Rev. *0,* U.S. Department of Energy Idaho Operations Office, May 2000.

DOE-ID, 2000c, *Final Comprehensive Record of Decision for Central Facilities Area Operable Unit 4-13,* DOE/ID-10719, Rev. 2, U.S. Department of Energy Idaho Operations Office, July 2000.

DOE-ID, 2001, *Record of Decision Amendment- Technical Support Facility Injection Well (TSF-05) and Surrounding Groundwater Contamination (TSF-23) and Miscellaneous No Action Sites Final Remedial Action,* DOE/ID-10139, U.S. Department of Energy Idaho Operations Office, Amendment, September 2001.

DOE-ID, 2002, *Record of Decision for Experimental Breeder Reactor I/Boiling Reactor Experiment Area and Miscellaneous Sites,* DOE/ID-10980, Rev. *0,* U.S. Department of Energy Idaho Operations Office, November 2002.

DOE-ID, 2003, *Explanation of Signijicant Differences for the Record of Decision for the Test Area North Operable Unit 1-10,* DOE/ID-11050, Rev *0,* U.S. Department of Energy Idaho Operations Office, April 2003.

DOE-ID M 451.A-1,2002, "National Environmental Policy Act (NEPA) Planning and Compliance Program," U.S. Department of Energy Idaho Operations Office, February 19,2002.

DOE-STD-1098-99, 1999, "Radiological Control," U.S. Department of Energy, July 1999.

EPA, 1999, *Region 10 Policy on the Use of Institutional Controls at Federal Facilities,* Office of Environmental Cleanup, Office of Waste and Chemicals Management, and Office of Regional Counsel, U.S. Environmental Protection Agency, Seattle, Washington, May 1999.

EPA, 2000a, "Interim Final Draft Policy Institutional Controls and Transfer of Real Property Under CERCLA", U.S. Environmental Protection Agency, 2000.

EPA, 2000b, "Institutional Controls: A Site Manager's Guide to Identifying, Evaluating, and Selecting Institutional Controls at Superfund and RCRA Corrective Action Cleanups," U.S. Environmental Protection Agency, September 2000.

EPA, 2001, "The Comprehensive Five-Year Review Guidance," OSWER Directive 9355.7-03B-P, EPA 540-R-01-007, Office of Emergency and Remedial Response, U.S. Environmental Protection Agency, June 2001. (This replaces OSWER Directive 9355.7-02A, "Supplemental Five-Year Review Guidance," July 1994.)

Executive Order 12580, 1987, "Superfund Implementation," Office of the President of the United States of America, January 23,1987.

HWMA, 1983, "Hazardous Waste Management Act of 1983," Idaho Code Sections 39-4401 et seq., 1983.

IDAPA 37.03.09, 1993, "Well Construction Standard Rules," Idaho Administrative Procedures Act, Idaho Department of Environmental Quality, July 1993.

Public Land Order 318, 1946, "Idaho; withdrawal as Naval Proving Ground," 11 FR 5745, May 13, 1946. (Modified by PLO No. 545)

Public Land Order 545, 1949, "See PLO No. 318," 14 FR 226, January 7, 1949.

Public Land Order 637, 1950, "Idaho; withdrawing public lands for use of U.S. Atomic Energy Commission," 15 FR 2069, April 7, 1950.

Public Land Order 1770, 1958, "Idaho; reserving lands for use of the Atomic Energy Commission with the National Reactor Testing Station near Arco," 23 FR 10360, December 19, 1958.

Public Law 103-160, 1993, "National Defense Authorization Act for Fiscal Year 1994," Title XXXI, Subtitle D, Section 3154, "Hall Amendment - Leasing Property," November 1993.

STD-101, 2002, "Integrated Work Control Process," Rev. 13, Site Maintenance, Idaho National Engineering and Environmental Laboratory, Idaho Falls, Idaho, October 2002.